



COURSE OVERVIEW HE0632

Certified HAZID Leader

Hazard Identification, Analysis and Risk-Based Decisions

Course Title

Certified HAZID Leader: *Hazard Identification, Analysis and Risk-Based Decisions*

Course Date/Venue

September 01-05, 2024/Boardroom, Warwick Hotel Doha, Doha, Qatar

Course Reference

HE0632

Course Duration/Credits

Five days/3.0 CEUs/30 PDHs



Course Description



This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

A Hazard identification (HAZID) study is the method of identifying hazards to prevent and reduce any adverse impact that could cause injury to personnel, damage or loss of property, environment and production, or become a liability. HAZID is a component of risk assessment and management. It is used to determine the adverse effects of exposure to hazards and plan necessary actions to mitigate such risks.



HAZID study takes into account all of the process and non-process hazards. It helps to design and organize the health, safety and environmental issues in an organization. HAZID involves machine or equipment designers, management and end users, and ensures a full identification of hazards and safeguard procedures in a workplace.



This course is designed to provide participants with a detailed and up-to-date overview of hazard identification, analysis and risk-based decisions. It covers the hazard and risk, accident model, physical and process hazards, the benefits of hazards identification and hazards types by industry; and the hazards through concept of recognition, basic human senses, relationship between senses and higher order processes and what causes hazards? By the end of the course, participants will be able to recognize the influence of human capabilities and





limitations on hazard identification by applying visual detection, sound detection, odor detection, touch detection and hazard recognition; determine explosion hazards, chemical hazards, electrical hazards, weather phenomena hazards and other types of hazards; evaluate hazards covering field surveys, pre-job assessments, facility assessments, incident and near-miss reporting, hazard identification and analysis training; carryout HAZID study, HAZID process, HAZID recording and raising effective corrective actions; implement other hazard identification techniques, HAZOP, failure modes and effects analysis (FMEA), plant walkdowns/audits, what if analysis and task analysis/job hazard analysis (JHA); employ risk-based decisions and risk ranking procedure; follow-up and call to action; and recognize the importance of managing change, published accident databases and resources, revitalized lessons learned, transfer knowledge and learn from incidents.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Get certified as a “*Certified HAZID Leader*”
- Discuss the hazard and risk, accident model, physical and process hazards, the benefits of hazards identification and hazards types by industry
- Identify hazards through concept of recognition, basic human senses, relationship between senses and higher order processes and what causes hazards?
- Recognize the influence of human capabilities and limitations on hazard identification by applying visual detection, sound detection, odor detection, touch detection and hazard recognition
- Determine explosion hazards, chemical hazards, electrical hazards, weather phenomena hazards and other types of hazards
- Evaluate hazards covering field surveys, pre-job assessments, facility assessments, incident and near-miss reporting, hazard identification and analysis training
- Carryout HAZID study, HAZID process, HAZID recording and raising effective corrective actions
- Implement other hazard identification techniques, HAZOP, failure modes and effects analysis (FMEA), plant walkdowns/audits, what if analysis and task analysis/job hazard analysis (JHA)
- Employ risk-based decisions and risk ranking procedure
- Follow-up and call to action as well as recognize the importance of managing change, published accident databases and resources, revitalized lessons learned, transfer knowledge and learn from incidents

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Haward Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.



Who Should Attend

This course provides an overview of all significant aspects and considerations of HAZID study and leadership for safety/environment professionals, production and facilities managers, design engineers, process engineers, facilities engineers, instrumentation and control engineers, regulatory/enforcement and compliance officers, process and plant operators and maintenance personnel. Further, the course is also beneficial for directors and senior managers with responsibility for implementing systems of effective corporate governance and management of risk; internal auditors involved in assessing systems of internal control across all the functions of their organisations; and those with operational responsibilities who need to appreciate risk management in more detail.

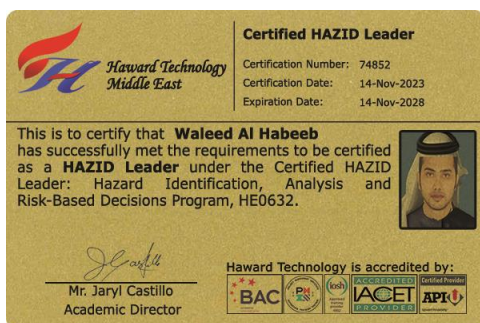
Course Certificate(s)

- (1) Internationally recognized Competency Certificates and Plastic Wallet Cards will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a "Certified HAZID Leader". Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-





- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course

* Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology * CEUs * Haward Technology *

Haward Technology Middle East

Continuing Professional Development (HTME-CPD)

CEUs

CEU Official Transcript of Records

TOR Issuance Date: 14-Nov-23

HTME No. 74852

Participant Name: Waleed Al Habeeb

Program Ref.	Program Title	Program Date	No. of Contact Hours	CEU's
HE0632	Certified HAZID Leader: Hazard Identification, Analysis and Risk-Based Decisions	November 10-14, 2023	30	3.0

Total No. of CEU's Earned as of TOR Issuance Date **3.0**

TRUE COPY

Jaryl Castillo
Academic Director

Haward Technology has been approved as an Accredited Provider by the International Association for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2018 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2018 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by

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Certificate Accreditations


Certificates are accredited by the following international accreditation organizations:-

- 
The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Course Fee

US\$ 6,000 per Delegate. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.



Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. John Burnip, EHS, SAC, STS, NEBOSH-ENV, NEBOSH-IGC, NEBOSH-IFC, NEBOSH-PSM, NEBOSH-IOG, TechIOSH, is a **NEBOSH Approved Instructor** and a **Senior HSE & Management Consultant** with over **50 years** of practical **Offshore & Onshore** experience within **Oil, Gas, Refinery, Petrochemical** and **Nuclear** industries. His wide experience covers **NEBOSH International General Certificate in Occupational Health & Safety**, **NEBOSH National Certificate in Construction Health & Safety**, **NEBOSH Certificate in Process Safety Management**, **NEBOSH Environmental Management Certificate**, **NEBOSH Certificate in Fire Safety**, **NEBOSH International Oil & Gas Certificate**, **PHA, HAZOP, HAZCOM, HAZMAT, HAZID, Hazard & Risk Assessment**, **Emergency Response Procedures Behavioural Based Safety (BBS)**, **Confined Space**

Entry, Fall Protection, Emergency Response, H₂S, Safety Management System (ISO 45001), Accident/Incident Investigation System and Report PSM, Risk Assessment, SCE FMEA Failure Investigations, Site Management Safety Training (SMSTS), Occupational Health & Safety and Industrial Hygiene, Crisis Management & Damage Control in Oil & Gas Industry, Enhancing HSSE Safety Performance & Effectiveness, Overhead & Gantry Crane Safety, HSSE Principles & Practices Advanced, Lifting & Rigging Equipment Lifting Tackles Inspection License/Relicense, API 780 Security Risk Assessment Methodology for Petroleum & Petrochemical, Advanced Process Safety Management with PHA, Quantitative and Qualitative Risk Assessment, IADC/API Mobile Drilling Rig Inspections, Maintenance and Audits, H2s Training and Rescue with Respiratory Equipment, Job Safety Analysis (JSA), Work Permit & First Aid, Project HSE Management System, Health & Hygiene Inspection, PTW Control, Process Modules Fire & Gas Commissioning, MSDS, Ergonomics, Lockout/Tagout, Fire Safety & Protection, Spill Prevention & Control, Tower & Scaffold Inspection, Scaffolding Operations, Scaffolding Equipment, Bracket Scaffolds, Scaffolding Labelling, Pre-fab Scaffolding; Erecting, Maintaining & Dismantling Scaffolding in accordance with the British Standards Code of Practice 5973; Heavy Lifting operations, Cantilevered Hoists, Offshore Operations, Offshore Construction, Basic Offshore Safety Induction & Emergency Training (BOSIET), Onshore Fabrication & Offshore Pipelaying & Hook-Up, Crane Inspection, Crane Operations, Oilfield Startup & Operation, Steel Fabrication, OSHA, ISO 9001, ISO 14001, OHSAS 18001 and IMO (SOLAS) Regulations. Mr. Burnip has greatly contributed in upholding the highest possible levels of safety for numerous International Oil & Gas projects, Generation Systems & Platform Revamp, LPG & Gas Compression, Marine, Offshore and Power Plant Construction. Currently, he is the **HSE Advisor of Solvay wherein he is responsible in planning and implementation of the corporate safety program (OSHA codes). Further, he is also well versed in **Job Design, Job Evaluation/Job Description, Management and Leadership and Change Management**.**

During Mr. Burnip's long career life, he had successfully carried out numerous projects in **Europe, North America, South America, Southeast Asia, Middle East** and the **North Sea**. He had worked for Delta Offshore Group, Solvay Asia Pacific, Likpin Dubai, SADRA/DOT, **ZADCO, McDermott International (USA, Qatar, Egypt, India, Oman, Dubai and Abu Dhabi), PDO, Shell, ARAMCO**, Salman Field, Lemam Offshore Gas Field, GEC, Harland & Wolff PLC Belfast in North Ireland, Howard Doris – Kishorn in Scotland, **Westinghouse Electric** in Brazil and South Korea and **Chevron Oil** in Scotland as the **Commissioning Project Engineer, Project & Safety Engineer, Estimating Engineer, Senior Instrument Engineer, Instrument Field Engineer, Lead Instrument Engineer, Instrument Engineer, Engineer, Emergency Response Training Manager, HSE Advisor, HSE Instructor, HSE Supervisor, Instrumentation Supervisor, Instrumentation Specialist, Project Coordinator, Instrumentation Technician and Tank Farm Instrumentation Technician**.

Mr. Burnip has a **Bachelor's degree in Business Studies** from the **Somerset University (UK)**. He is a **Certified/Registered Tutor** in **NEBOSH Certificate in Environmental Management, NEBOSH International General Certificate, NEBOSH International Certificate in Fire Safety & Risk Management, NEBOSH Process Safety Management Certificate** and **NEBOSH International Oil & Gas Certificate**; a **Certified Safety Auditor (SAC)**; a **Certified ISO 45001 Auditor**; an **Environmental Health and Safety Management Specialist** on **Fall Protection, Elevated Structures, Material Handling, Trenching & Excavations**; a **Welding Brazing Safety Technician**; a **Certified Safety Administrator (CSA) - General Industry**; a **Safety Manager/Trainer – General Industry**; a **Petroleum Safety Manager (PSM) - Drilling & Servicing**; a **Petroleum Safety Specialist (PSS) - Drilling & Servicing**; a **Safety Planning Specialist**; a **Safety Training Specialist**; a **Certified Instructor/Trainer**; a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)** and further holds a **Certificate in Mechanical Engineering Craft Practice** from the **City & Guilds of London Institute**; a **NEBOSH Level 3 Construction Certificate (UK)**; and holds a **Cambridge Teaching Certificate**. He is a well-regarded member of the **National Association of Safety Professionals**, the **Association of Cost Engineers (UK)**, **Institution of Occupational Safety & Health (TechIOSH)** and an **Associate Member of World Safety Organization**. Further, he has conducted innumerable trainings, workshops and conferences worldwide.





Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Sunday, 01st of September 2024

0730 – 0800	Registration & Coffee
0800 – 0815	Welcome & Introduction
0815 – 0830	PRE-TEST
0830 – 0930	Introduction Hazard and Risk • Accident Model • Physical and Process Hazards • Benefits of Hazards Identification • Hazards Types by Industry
0930 – 0945	Break
0945 – 1100	Identify Hazards Concept of Recognition • Basic Human Senses • Relationship Between Senses and Higher Order Processes • What Causes Hazards?
1100 – 1230	Influence of Human Capabilities & Limitations on Hazard Identification Visual Detection • Sound Detection • Odor Detection • Touch Detection • Hazard Recognition
1230 – 1245	Break
1245 – 1420	Explosion Hazards Reactive Explosion Hazards • Flammable Explosion Hazards • Physical Explosion Hazards
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day One

Day 2: Monday, 02nd of September 2024

0730 – 0930	Chemical Hazards Toxic Chemical Hazards • Fire Hazards • Corrosive Chemical Hazards
0930 – 0945	Break
0945 – 1100	Electrical Hazards Shock/Short Circuit • Fire • Lightning Strikes • Static Electrical Discharge • Loss of Power
1100 – 1230	Weather Phenomena Hazards Temperature Extreme Hazards • Hurricane • Flood • Wind
1230 – 1245	Break





1245 – 1330	Other Types of Hazards Excavation Hazards • Asphyxiation Hazards • Elevation Hazards • Thermal Hazards • Vibration Hazards • Mechanical Failure Hazards • Mechanical Hazards
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Two

Day 3: Tuesday, 03rd of September 2024

0730 – 0930	Other Types of Hazards (cont'd) Corrosion Hazards • Noise Hazards • Radiation Hazards • Impact Hazards • Struck Against Hazards • Visibility Hazards
0930 – 0945	Break
0945 – 1100	Evaluate Hazards Field Surveys • Pre-Job Assessments • Facility Assessments • Incident and Near-Miss Reporting • Hazard Identification and Analysis Training
1100 – 1230	HAZID Study The HAZID Team • The HAZID Process • Example HAZID Checklists
1230 – 1245	Break
1245 – 1420	HAZID Study (cont'd) Recording the HAZID (the Hazard Register/Fault Schedule/Hazard Log) • Raising Effective Corrective Actions
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Three

Day 4: Wednesday, 04th of September 2024

0730 – 0930	Other Hazard Identification Techniques HAZOP • Failure Modes and Effects Analysis (FMEA) • Plant Walkdowns/Audits • What If? Analysis • Task Analysis/Job Hazard Analysis (JHA)
0930 – 0945	Break
0945 – 1100	Make Risk-Based Decisions Hazard Ranking • Understanding Risk • Risk Ranking
1100 – 1230	Risk Ranking Procedure Severity • Hierarchy of Safeguards or Layers of Protection • Likelihood • Risk Ranking • Example 1 – Flammable/Explosive Hazard • Example 2 – Flammable Hazard • More Detailed Matrices • Similarities between More Sophisticated Process Hazard Evaluation Techniques
1230 – 1245	Break
1245 – 1420	Follow-up & Call to Action Safety Culture • Management Commitment • Employee Ownership • Implement an Effective Hazard Management Program • Hazard Communication • Call to Action
1420 – 1430	Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow
1430	Lunch & End of Day Four





Day 5: Thursday, 05th of September 2024

0730 – 0930	Learning & Continuous Improvement Importance of Managing Change • Published Accident Databases & Resources • Revitalizing Lessons Learned • Transfer of Knowledge • Learning from Incidents
0930 – 0945	Break
0945 – 1100	Practical HAZID Study - Oil Refinery Fire, 2007
1100 – 1230	Practical HAZID Study - Oil Refinery Fire, 2007 (cont'd)
1230 – 1245	Break
1245 – 1300	Practical HAZID Study - Oil Refinery Fire, 2007 (cont'd)
1300 – 1315	Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course
1315 – 1415	COMPETENCY EXAM
1415 – 1430	Presentation of Course Certificates
1430	Lunch & End of Course

Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art “Howard PHA/HAZOP”, “QRA”, “Visio”, “Mindview” and “Workplace Risk Assessment” simulators.

The screenshot displays the Howard PHA/HAZOP Simulator interface. It features several overlapping windows and panels:

- Master List: Sections:** A table listing sections with columns for No., Highlight, Method, Type, Name, and Description. Sections include Tank/Vessel, Line/Pipe, and Heat Exchanger.
- Risk Matrix Safety:** A matrix with columns for Severity (S1-S4) and Likelihood (L1-L4). Risk cells are color-coded (green, yellow, red) and labeled with risk levels like 'Acceptable with control' or 'Not desirable - Risk control measures to be taken'.
- Master List: Action Items:** A table with columns for No., Refs, and Action. It lists tasks such as 'Verify that all of the chlorine vaporizer...'.
- Master List: Team Members:** A participation matrix with columns for team members (Kathryn Grady, Alex James, Marcus Samuels) and rows for different process steps.
- HAZOP Worksheet:** A detailed view of a specific hazard, showing causes, consequences, and safeguards.

Howard PHA/HAZOP Simulator



The screenshot displays the QRA System Simulator interface. It features several windows: a main project tree on the left listing components like 'Engine System', 'Fuel System', and 'Wings System'; a central 'QRA Results View' window showing a CDF (Cumulative Distribution Function) graph with a red curve and a 'STATISTIC VALUE' table; and a fault tree diagram on the right. The 'STATISTIC VALUE' table includes the following data:

Statistic	Value
Mean	0.3501
Std	0.1893
5th	0.2282
10th	0.2544
50th	0.3513
90th	0.4439
95th	0.469
99th	0.5157

QRA System Simulator

The screenshot shows Visio Professional with an Ishikawa diagram titled 'Ishikawa diagram - Factors reducing competitiveness'. The diagram is a fishbone chart with a central red arrow pointing to the right, labeled 'Reduced Competitiveness'. The main categories (bones) are 'External Environment', 'Management Project Approach', 'Management', 'Corporate Structure', 'Staff', and 'Process Approach to Management'. Various specific causes are listed for each category, such as 'Disregard for Research and Development' and 'Lack of Training Programs'. The software interface includes a 'Shapes' panel on the left and a status bar at the bottom indicating 'PAGE 1 OF 1' and '71%' zoom.

Visio Software



The screenshot displays the Mindview Software interface. At the top, a mind map titled "Problem Solving" is shown with nodes for "Assessment", "Planning", "Measurement", and "Monitoring". Below the mind map, a Microsoft Word document is open, showing a structured document with sections corresponding to the mind map nodes. The Word document includes sections for "Planning", "Measurement", and "Analysis".

Mindview Software

The screenshot shows the Workplace Risk Assessment (WRAM) software interface. The title bar reads "Workplace Risk Assessment Input Form". The main window displays a form for "Test Workplace Risk Assessment" at "Ramsgate". The form is divided into sections, with "Section 5" selected. Under "Section 5", there are five questions related to lighting, each with a "Y/N/NA" dropdown and a "Details / Comments" text area.

Workplace Risk Assessment

Course Coordinator

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